

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-17. (cancelled)

18. (new) A method for monitoring an exhaust system of a motor vehicle, comprising:

measuring exhaust-gas temperature at an outlet side of an exhaust pipe section which is intended to accommodate a component with a purifying activity;

measuring exhaust-gas temperature at an inlet side of the exhaust pipe section;
and

comparing a time curve of the outlet-side exhaust-gas temperature with a time curve of the inlet-side exhaust-gas temperature, wherein the comparison comprises determining a time derivative of the outlet-side exhaust-gas temperature or of the inlet-side exhaust-gas temperature.

19. (new) The method as claimed in claim 18, further comprising determining both the time derivative of the outlet-side exhaust-gas temperature and the time derivative of the inlet-side exhaust-gas temperature, and determining the difference between the time derivatives.

20. (new) The method as claimed in claim 19, further comprising generating a signal which indicates the absence of the component with a purifying activity or the presence of an incorrect component if the difference between the derivatives is within a predetermined range of values.

21. (new) The method as claimed in claim 19, further comprising generating a signal which indicates the absence of the component with a purifying activity or the presence

of an incorrect component if the difference between the derivatives is within a predetermined range of values and the time derivative of the inlet-side exhaust-gas temperature is outside a predetermined range of values.

22. (new) The method as claimed in claim 18, determining the time derivative of the outlet-side exhaust-gas temperature, the time derivative of the inlet-side exhaust-gas temperature, and the time derivative of a calculated value for the exhaust-gas temperature at the outlet side of the exhaust pipe section, and generating a signal which indicates the absence of the component with a purifying activity or the presence of an incorrect component if the difference between the derivatives is outside a predetermined range of values and the time derivative of the inlet-side exhaust-gas temperature is outside a predetermined range of values.

23. (new) A method for monitoring an exhaust system of a motor vehicle, comprising:

measuring exhaust-gas temperature at an outlet side of an exhaust pipe section which is intended to accommodate a component with a purifying activity;

determining a calculated value for the exhaust-gas temperature at the outlet side of the exhaust pipe section on the basis of at least one of the heat-storing and fluid-dynamic action of the component with a purifying activity; and

comparing a time curve of the measured outlet-side exhaust-gas temperature with a time curve of the calculated value for the exhaust-gas temperature at the outlet side.

24. (new) The method as claimed in claim 23, further comprising determining the time derivative of the outlet-side exhaust-gas temperature, the time derivative of the calculated temperature, and the difference between the derivatives.

25. (new) The method as claimed in claim 24, further comprising generating a signal which indicates the absence of the component with a purifying activity or the presence of an incorrect component if the difference between the derivatives is outside a predetermined range of values.

26. (new) The method as claimed in claim 23, determining the time derivative of the outlet-side exhaust-gas temperature, the time derivative of a measured inlet-side exhaust-gas temperature at an inlet side of the exhaust pipe section, and the time derivative of the calculated value for the exhaust-gas temperature at the outlet side of the exhaust pipe section, and generating a signal which indicates the absence of the component with a purifying activity or the presence of an incorrect component if the difference between the derivatives is outside a predetermined range of values and the time derivative of the inlet-side exhaust-gas temperature is outside a predetermined range of values.

27. (new) A method for monitoring an exhaust system of a motor vehicle having an internal combustion engine and having monitoring electronics, a temperature sensor for measuring an outlet-side exhaust-gas temperature being arranged at the outlet side of an exhaust pipe section which is intended to accommodate a component with a purifying activity, and the monitoring electronics compare a time curve of the outlet-side exhaust-gas temperature with a time curve of an inlet-side exhaust-gas temperature at the inlet side of the exhaust pipe section, wherein the comparison comprises forming a time derivative.

28. (new) The method as claimed in claim 27, wherein the monitoring electronics determine the time derivatives and of the inlet-side exhaust-gas temperature and the outlet-side exhaust-gas temperature, and the difference between the derivatives.

29. (new) The method as claimed in claim 28, wherein the monitoring electronics generate a signal which indicates the absence of the component with a purifying activity or the presence of an incorrect component if the difference between the derivatives is within a predetermined range of values.

30. (new) The method as claimed in claim 28, wherein the monitoring electronics generate a signal which indicates the absence of the component with a purifying activity or the presence of an incorrect component if the difference between the derivatives is within a predetermined range of values and the time derivative of the inlet-side exhaust-gas temperature is outside a predetermined range of values.

31. (new) The method as claimed in claim 27, wherein the monitoring electronics determine the time derivatives and of the inlet-side exhaust-gas temperature and of the outlet-side exhaust-gas temperature and also the time derivative of the calculated value for the exhaust-gas temperature at the outlet side of the exhaust pipe section and generate a signal which indicates the absence of the component with a purifying activity or the presence of an incorrect component if the difference between the derivatives is outside a predetermined range of values and the time derivative of the inlet-side exhaust-gas temperature is outside a predetermined range of values.

32. (new) A method for monitoring an exhaust system of a motor vehicle having an internal combustion engine and having monitoring electronics, a temperature sensor for measuring an outlet-side exhaust-gas temperature being arranged at the outlet side of an exhaust pipe section which is intended to accommodate a component with a purifying activity, and the monitoring electronics compare a time curve of the outlet-side exhaust-gas temperature with a time curve of a calculated value for the exhaust-gas temperature at the outlet side of the exhaust pipe section, wherein the calculated value is determined on the basis of the heat-storing and/or fluid-dynamic action of the component with a purifying activity.

33. (new) The method as claimed in claim 32, wherein the monitoring electronics determine the time derivatives and of the outlet-side exhaust-gas temperature and of the calculated temperature and the difference between the derivatives.

34. (new) The method as claimed in claim 33, wherein the monitoring electronics generate a signal which indicates the absence of the component with a purifying activity or the presence of an incorrect component if the difference between the derivatives is outside a predetermined range of values.

35. (new) The method as claimed in claim 32, wherein the monitoring electronics determine the time derivatives and of the inlet-side exhaust-gas temperature and of the outlet-side exhaust-gas temperature and also the time derivative of the calculated value for the exhaust-gas temperature at the outlet side of the exhaust pipe section and generate a signal which indicates the absence of the component with a purifying activity or the presence of an

incorrect component if the difference between the derivatives is outside a predetermined range of values and the time derivative of the inlet-side exhaust-gas temperature is outside a predetermined range of values.